

REMARKS

With the forgoing amendment, claim 21 has been amended to include features that were previously recited in claim 22. As a result, claim 22 has been canceled and claims 23 and 24 have been amended to depend from claim 21. Applicants respectfully submit that no new matter has been added.

Formal Matters

Applicants note with appreciation that the Examiner indicated consideration of all the documents cited by the Information Disclosure Statement submitted November 27, 2006. However, it appears that the Examiner did not consider the Information Disclosure Statement submitted April 15, 2009. Applicants respectfully request that the Examiner consider the documents submitted in the Information Disclosure Statement of April 15, 2009 and indicate such consideration.

Applicants note with appreciation that the Office Action indicates that all of the priority documents have been forwarded by the International Bureau.

Claim Rejections

Claims 21-26 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Okuno (U.S. Patent No. 5,338,008). Claims 21, 26, and 27 are also rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Campbell (U.S. Patent No. 4,334,646). The Action asserts that each and every feature of the rejected claims is disclosed by the cited documents. Applicants respectfully disagree.

With the foregoing amendments to the claims and the following remarks, Applicants respectfully submit that both Okuno and Campbell fail to disclose:

A solder bump forming apparatus for forming a solder bump through heating and reflowing a solder composition on a substrate where a plurality of pad electrodes are provided, wherein:
the solder composition is made of a mixture of solder particles and a liquid material that contains a flux component, which becomes liquid at a normal temperature or when heated; and

a heating device is provided for heating the solder composite from a first side of the substrate; and
a thermostat device for controlling a temperature of the solder composition is provided at a position above a mount plate, which is located over a second side of the substrate.

Addressing the rejection over Campbell first, Applicants respectfully submit that independent claim 21 has been amended to recite the features of claim 22, which the Office has not rejected over Campbell. Accordingly, without further remarks, Applicants respectfully request withdrawal of the rejections over Campbell because this document fails to disclose each and every feature of the claimed invention.

Applicants note that the presently claimed invention recites a solder bump forming apparatus, wherein a solder composition is heated by a heating device from one side of the apparatus, and the temperature of the solder composition is controlled from the other side of the substrate by using a thermostat device provided at a position above a mount plate. Accordingly, the temperature of the solder composition is controlled by producing a temperature difference between one side of the substrate, e.g., the bottom part of the substance, and the other side thereof, e.g., the top side of the substrate.

Applicants respectfully submit that Okuno fails to disclose such feature. In fact, Okuno is silent regarding temperature differences between the top side and the bottom side of the substrate. In the absence of a teaching of this feature, there can be no anticipation of the claimed invention. Accordingly, the rejections under 35 U.S.C § 102(b) should be withdrawn.

SUMMARY AND CONCLUSION


In view of the foregoing, it is submitted that the Examiner's rejections should be withdrawn. Entry and consideration of the present amendment, reconsideration of the outstanding Office Action, and allowance of the present application and all of the claims therein are respectfully requested are now believed to be appropriate.

Applicant notes that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the claims. Further, no acquiescence as to the propriety of the Examiner's rejections is made by the present

amendment. All other amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

If the Examiner has any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone

Respectfully Submitted,
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